



MANITOWOC PUBLIC UTILITIES

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Mr. Randy Matty
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

August 23, 2013

RE: Semi-Annual Monitoring Report (first half of 2013)

Dear Mr. Matty:

Permit condition ZZZ.7.b.(1) of Manitowoc Public Utilities' permit #: 436035930-P21 requires us to submit a **semi-annual monitoring report** covering the period of January 1, 2013 to June 30, 2013. This report is to be submitted within 60 days after the end of the monitoring period.

The following significant events occurred during this monitoring period:

- EPA CAIR and Acid Rain Program (ARP) annual SO₂ reconciliation reports for compliance year 2012 received March 4, 2013 with sufficient allowances available for compliance.
- EPA CAIR NO_x annual reconciliation report for compliance year 2012 received March 4, 2013 with sufficient allowances available for compliance.
- Submitted and certified the 2012 eGGRT report with EPA on March 25, 2013. Submitted and certified the revised 2010 and 2011 eGGRT reports with EPA on April 10, 2013.
- WDNR completed the Full Air Compliance Evaluation Summary and issued a report on April 12, 2013 concluding the facility was in compliance with all Wisconsin Air regulations.
- Prepared and submitted Summary of MPU Subpart ZZZZ of Part 63 RICE Units report to the WDNR On May 2, 2013. The P28 dual fuel diesel generator was removed from the MISO model as a generator effective March 1, 2013. The unit is available for MISO to call up under emergency conditions only and as a result it only operated 1-hour during the monitoring period to verify operational status.
- Filed request with the WDNR for new source CAIR allowance for unit 9. Responded to the WDNR request to review the Wisconsin CAIR NO_x allocations for 2015 to 2019.
- Submitted an air pollution control operation permit application, plans and specifications on May 14, 2013. WDNR issued draft operating permit#: 436035930-P22 on June 3, 2013 to

address the changes requested in the application. WDNR issued public notice for the Power Plant Operating Permit Renewal (Permit-P22) on June 14, 2013.

- Quarterly excess emission reports filed on April 15, 2013 (Q1) and on July 15, 2013 (Q2).

Please find enclosed a summary of our monitoring efforts for this time period. We believe this summary report contains all the information you will need to determine MPU's compliance status.

It is our understanding that you requested the supporting documents used to create this report be included with the submittal. In order to comply with this request; enclosed please find a CD containing the reference materials.

If, however, you need additional information or have any questions about this report or its contents, please don't hesitate to contact Mr. Jerry Ahlswede of my staff at (920) 686-4211.

I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached report are true, accurate and complete.

Sincerely,

Nilaksh Kothari, P.E.
General Manager

cc. Red Jones - (MPU) w/attachments
Jerry Ahlswede - (MPU) w/attachments
Tom Reed - (MPU) w/attachments
Scott Karbon - (MPU) w/attachments
Document Management Files - (MPU)

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**Manitowoc Public Utilities
Power Plant**

**701 Columbus Street
Manitowoc, Wisconsin**

Semi-Annual

Summary of Monitoring Results

DNR Permit No.:436035930-P21

For the Period

January 1, 2013

to

June 30, 2013

Prepared August 23, 2013

Approved by:

Jerry Ahlswede
Energy Supply and Production Supervisor

Date: _____

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
S10 P28 Dual-fuel RICE Generator	Particulate Visible Nitrogen Oxide Sulfur dioxide NR 445 HAP Fed HAP	condition B1a(1) condition B1b(1) condition B2a(1) condition B2b(1) condition B3a(1) condition B3a(3)(b) condition B4a(1) condition B5a(1) condition B5a(2) condition B6a	0.15 lb/mmBtu Burn only distillate oil & natural gas 20% opacity Operate, maintain and calibrate a COM Burn ≤4,814 mmBtu fuel/month-12 avg ≤ 6.0 grams NOx per brake horsepower #2 Oil Sulfur content ≤0.3% by weight Burn ≤10,000 gal oil fuel/month-12 avg Sulfur content to meet on-road use. Comply with Subpart ZZZZ by 5/3/2013	UNKNOWN COMP-R COMP-COM COMP-EER COMP-R COMP-ST 1996 COMP-R COMP-R COMP-R COMP-R	No excess emissions Max. avg.: 109 m/M 7/10/12: 9.18 ppm S Max. avg.: 2,530 gallons 7/10/12: 9.18 ppm S March 1, 2013 MISO status changed to emergency use only.
S10, B09 Circulating Fluidized Bed Boiler with baghouse C09 <i>Conditions from air permit # 02-RV-147.</i>	Particulate, PM ₁₀ , PM _{2.5} Sulfur Dioxide Nitrogen Oxides Carbon monoxide	condition D1.a(1) condition D1.a(3) condition D1,2b(2) condition D1,2b(3) condition D1,2c(2) condition D1,2c(3) condition D2.a(1) condition D2.a(2)(a) condition D2.a(2)(b) condition D3a(1)(a) condition D3a(1)(b) condition D3a(2) condition D3a(3) condition D3a(4) condition D3c(2) condition D4a(1) condition D4a(2) condition D4a(3) condition D4b(1) condition D4b(4) condition D5a(1)(b) condition D5a(1)(c) condition D5b(2)	0.03 lb/mmBtu 4.025 ton PM /12-month rolling avg. Only operate B09 with C09 operating Maintain C09 Δp between 0.4 and 9 in. Record Δp 1x/8 hours operation, 1x/day Record inspection/maintenance on C09 0.03 lb/mmBtu 3.19 ton PM ₁₀ /12-month rolling avg. 2.56 ton PM _{2.5} /12-month rolling avg. 0.30 lb/mmBtu 30-day avg. 71.2 ton /12-month rolling avg. Achieve ≥ 70% SO2 reduction Fire only coal, pet. coke, biomass 51.02 ton /12-month rolling avg. Operate, maintain, calibrate SO2-CEM 0.155 lb/mmBtu 30-day avg except SSM 24.62 ton /12-month rolling avg. 23.33 ton /12-month rolling avg. Control with good combustion, SNCR Operate, maintain, cal. CO2 & NOx-CEM 0.15 lb/mmBtu, 30-day avg except SSM 35.6 ton /12-month rolling avg. Operate, maintain, calibrate CO-CEM	COMP-ST 4-2012 COMP-R COMP-BH/R COMP-R COMP-R COMP-R COMP-ST 4-2012 COMP-R COMP-R COMP-CEM COMP-CEM COMP-CEM COMP-R COMP-CEM COMP-EER COMP-CEM COMP-CEM COMP-CEM COMP-R COMP-EER COMP-CEM COMP-CEM COMP-EER	0.009 lb/mmBtu Max(Ave): 0.565 ton/M Range: 0.77-4.77 in. Inspected May 8, 2013 0.017 lb/mmBtu Max(Ave): 0.565 ton/M Max(Ave): 0.355 ton/M Max. avg.: 0.228 lb/m Max. avg.: 9.2 ton/M Min. avg.: 95.7 % Max. avg.: 8.09 ton/M Max. avg.: 0.086 lb/m Max. avg.: 2.74 ton/M Max. avg.: 2.54 ton/M Max. avg.: 0.043 lb/m Max. avg.: 1.02 ton/M

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
	VOC	condition D6a(1) condition D6b(1)	0.013 lb/mmBtu Maintain good combustion practices	COMP-CEM/R COMP-CEM/R	Demonstrated by CO Demonstrated by CO
	Lead	condition D7a(1)	2.0 x 10E-4 lb/mmbtu	COMP-ST 5/2010 COMP-BH	9.33 E-7 lb/ mmBtu
		condition D7a(2)	0.028 ton /12-month rolling avg.	COMP-R	Max(A): 3.10E-05 ton/M
	Mercury	condition D8a(1)	3.52 x 10E-5 lb/mmbtu	COMP-ST 5/ 2010 COMP-BH	5.23 E-7 lb/ mmBtu
	Flourides	condition D9a(1)	0.0017 lb/mmbtu	COMP-ST 5/ 2010 COMP-BH	<0.000154 lb/ mmBtu
		condition D9a(2)	0.338 ton /12-month rolling avg.	COMP-R	Max(Ave): 0.0196 ton/M
	Visible	condition D10a(1) condition D10c(2)	20 % opacity Operate, maintain and calibrate a COM	COMP-COM COMP-EER	No excess emissions
	Benzene	condition D11a(1) condition D11b(1)	0.0325 lb/hour Maintain good combustion practices	COMP-ST 5/ 2010 COMP-CEM/R	6.15 E-6 lb/mmBtu Demonstrated by CO
	Polychlo-rinated Di-Dioxins	condition D12a(1)	Good combustion controls	COMP-CEM/R	Demonstrated by CO
	Ammonia	condition D13(1)(a) condition D13(1)(b)	25 ppm 15.8 lb/hour	COMP-ST 9/2011 COMP-ST 9/2011	2.64 ppm 1.01 lb/hour
	Sulfuric Acid Mist	condition D14a(1) condition D14a(2)	0.0045 lb/mmBtu, 24 hour average 0.99 ton /12-month rolling avg.	COMP-ST 9/2011 COMP-R	0.0022 lb/mmBtu Max(Ave): 0.071 ton/M
	Formaldehyde	condition D15a(1) condition D15b(1)	0.0060 lb/hour Maintain good combustion practices	COMP-ST 5/ 2010 COMP-CEM/R	<5.49 E-6 lb/mmBtu Demonstrated by CO
	Greenhouse Gas	condition D17a(1)	42,289 ton CO2e /12-month rolling avg.	COMP-CEM/R	Max(Ave): 7,035 ton/M
S20 B28 Boiler – Controlled by baghouse C30	Particulate /PM10	condition E1a(1) condition E1a(2) condition E1a(3) condition E1a(4) condition E1a(5)(a)	0.03 lb/mmBtu (99% reduction) Fire coal, coke, biomass, ≤30% TDF,alt. Fire ≤30%/QTR from MSW Fire natural gas @start up, stablization 1.383 ton PM /12-month rolling avg.	COMP-ST 8-2012 COMP-R COMP-R COMP-R COMP-R	0.01394 lb/mmBtu-total No TDF or approved alt. No MSW Max(Ave): 0.575 ton/M

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
		condition E1a(5)(b) condition E1a(5)(c) condition E1b(1) condition E1b(2) condition E1b(4) condition E1c(4)	1.383 ton PM10/12-month rolling avg. 0.94 ton PM2.5/12-month rolling avg. Only operate B28 with C30 operating Maintain C30 Δp between 0.2 and 10 in. Fluorescent Powder Test 1x/yr on C30 Record Δp 1x/8 hours operation, 1x/day	COMP-R COMP-R COMP-BH/R COMP-R COMP-R COMP-R	Max(Ave): 0.575 ton/M Max(Ave): 0.33 ton/M Range: 0.34-6.79 in. Tested 03-21-2013 AOK
	Sulfur Dioxide	condition E2a(1) condition E2a(2)(a) condition E2a(2)(b) condition E2a(3) condition E2b(2)	0.89 lb/mmBtu, and 90% reduction when S >1% or 70% reduction when S <1% ≤ 4.5% Sulfur content for coal ≤ 8.0% Sulfur content for pet. coke 34.125 ton /12-month rolling avg. Operate, maintain, calibrate S02-CEM	COMP-CEM COMP-R COMP-R COMP-CEM COMP-EER	Max. Avg.: 0.138 lb/m Min. Reduction: 94.1 % Max. coal S: 0.24% Max. coke S: 5.91% Max. avg.: 6.520 ton/M
	Visible Emissions	condition E3a(1) condition E3b(1)	20% Opacity Operate, maintain and calibrate a COM	INT-COMP-COM COMP-EER	60 min excess emissions
	Nitrogen Oxides	condition E4a(1) condition E4a(2) condition E4a(3) condition E4b(1)	0.55 lb/MMBtu and 65% reduction PCC 0.20 lb/MMBtu in ozone season 7.76 ton NOx/12-month rolling avg. Operate, maintain, cal. C02 & NOx-CEM	COMP-CEM COMP-CEM COMP-CEM/R COMP-EER	Max. Avg.: 0.178 lb/m Max. Avg.: 0.105 lb/m Max(Ave): 3.48 ton/M
	Carbon Monoxide	condition E5a(1)(b) condition E5a(1)(c) condition E5b(2)	0.36 lb/mmBtu, 30-day avg except SSM 35.5 ton /12-month rolling avg. Operate, maintain, calibrate C0-CEM	COMP-CEM COMP-CEM COMP-EER	Max. avg.: 0.180 lb/m Max. avg.: 4.4 ton/M
	Organic compds.	condition E6a(1) condition E6a(1) condition E6a(2) condition E6b(2)(a)	0.16 lb/mmBtu 0.16 lb/mmBtu 1.3 ton /12-month rolling avg. Maintain good combustion practices	COMP-CEM/R COMP-ST 8-2012 COMP-CEM/R COMP-CEM/R	Demonstrated by CO 0.000707 lb/mmBtu Max. avg.: 0.05 ton/M Demonstrated by CO
	Beryllium	condition E7a(1) condition E7c(2)	0.00004 lb/MMBtu Analyze each fuel delivery for Be	COMP-R COMP-R	Max.: 4.14 E-7 lb/mmBtu Coke: <1.0 µg/g Coal: 0.23 µg/g Paper:<0.1 µg/g
	Mercury	condition E8a(1)	≤ 1 ug/cubic meter ambient, 30-day avg.	COMP-BH	
	Lead Nickel	condition E9a(1)(a) condition E9a(1)(b)	0.012 Lb/hr 0.008 Lb/hr	COMP-BH COMP-BH	

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
	Arsenic Cadmium Chromium Lead	condition E9a(1)(c) condition E9a(1)(d) condition E9a(1)(e) condition E9a(2)	0.004 Lb/hr 0.014 Lb/hr 0.29 Lb/hr 0.017 ton /12-month rolling avg.	COMP-BH COMP-BH COMP-BH COMP-R	Max.: 9.01E-05 ton/M
	Benzene Formaldehyde	condition E10a(1)(a) condition E10a(1)(b) condition E10b(1)	0.012 Lb/hr 0.028 Lb/hr Maintain good combustion practices	COMP-CEM/R COMP-CEM/R COMP-CEM/R	Demonstrated by CO Demonstrated by CO Demonstrated by CO
	Stack Flow Fugitive Dust	condition E11a(1) condition E12a(1)	Operate, maintain and calibrate a CFM 10% opacity from transfer points and silo vents for limestone and ash handling	COMP-EER COMP-R because vented into B28	
	Greenhouse Gas	condition E14a(1) condition E14a(2)	Operate and maintain a CO2 CEM 13,816 ton CO2e /12-month rolling avg.	COMP-EER COMP-CEM/R	Max(Ave): 4,893 ton/M
	Fuel Limit	condition E15a(1)	133,333 mmBtu/M/12-month rolling avg. excluding biomass.	COMP-CEM/R	Max(Ave): 16,532 mmBtu/M
	Sulfuric Acid Mist	condition E17a(1)	0.64 ton /12-month rolling avg.	COMP-CEM/R	Max(Ave): 0.12 ton/M
	Fluorides	condition E18a(1)	0.054 ton F/12-month rolling avg.	COMP-BH/R	Max(Ave): 0.014 ton/M
S31, P31 North Ash Conveyor – Controlled by baghouse C31	Particulate	condition F1a(1) condition F1b(1) condition F1b(2) condition F1c(3) condition F1b(3) condition F1b(4) condition F1b(5)	0.57 lb/hour when direct discharging Only operate P31 with C31 Maintain C31 Δp between 0.2-10 in Record Δp 1x/8 hrs operation or 1x/day Perform annual inspection of C31 Operate, maintain and calibrate a CDMS If opacity >0% shutdown P31 when Δp across downstream in-line filter ≥1 in Hg	COMP-BH COMP-R COMP-R COMP-R COMP-R COMP-R COMP-R	1.55 inches. The north ash system was not in service during this period and was operated one day for testing.
	Visible	condition F2a(1)	10% opacity from transfer points and silo vents handling ash from B28	COMP-R	
S32, P32 South Ash Conveyor – Controlled by	Particulate	condition G1a(1) condition G1b(1) condition G1b(2) condition G1c(3) condition G1b(3)	0.92 lb/hour when direct discharging Only operate P32 with C32 Maintain C32 Δp between 0.2-10 in Record Δp 1x/8 hrs operation or 1x/day Perform annual inspection of C32	COMP-BH COMP-R COMP-R COMP-R COMP-R	Process P32 is currently recycled to boiler B28. Range: 1.85-9.42 in. Inspected March 12, 2013

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
baghouse C32	Visible	condition G1b(4) condition G1b(5) condition G2a(1) condition G2a(2)	Operate, maintain and calibrate a CDMS If opacity >0% shutdown P32 when Δp across downstream in-line filter ≥ 1 in Hg 20% opacity 10% opacity from transfer points and silo vents handling ash from B28	COMP-R COMP-R COMP-R COMP-R	
S11, P11 Solid Fuel Storage & Reclaim Area (coke pile)	Fugitive Dust	condition H1a(1) condition H1b(1) condition H1b(2) condition H1b(3) condition H1b(4) condition H1c(2)	20% opacity from fuel storage areas Dust created shall be controlled using wet suppression system per FDCP. Transfer to pile with stacking conveyor. Develop and follow a FDCP. ≥ 1 trained person to monitor compliance Record operation daily and FDCP action	COMP-R COMP-R COMP-R COMP-R COMP-R COMP-R	Note: No coke delivered during this period. 21 trained employees
S12, P12, C12 B09 Solid Fuel Crusher House & Conveyor	Particulate PM-10 Visible	condition I1a(1) condition I1b(1) condition I1b(2) condition I1b(4) condition I2a(1) condition I2a(2)	3.42 lb/hr Use baghouse C12 to control P12 Operate C12 when P12 is in operation Maintain C12 Δp between 0.2-10 in 20% opacity 10% opacity w/coal dust	COMP-ST COMP-R COMP-R COMP-R COMP-BH COMP-BH	Range: 0.50-7.88 in.
S13b, P13b, C13b Solid Fuel Conveyor for B09, B28	Particulate PM-10 Visible	condition J1a(1)(a) condition J1a(1)(b) condition J1a(1)(c) condition J1b(1) condition J1b(2) condition J1c(3) condition J1b(3) condition J2a(1) condition J2a(2)	Do not use bypass stack S13 Exhaust into B28 2.28 lb/hour if discharged out S10 only operate P13b with baghouse C13b maintain C13b Δp between 0.2-10 in record Δp 1x/8 hours operation or 1x/day perform annual inspection of C13b 20% opacity 10% opacity w/coal dust	COMP-R COMP-R COMP-R COMP-R COMP-R COMP-R COMP-R COMP-BH COMP-BH	Range: 0.9-4.5 in. Inspected June 12, 2013
S14, P14 East Ash Conveyor Controlled by baghouse C14	Particulate Visible Fugitive Dust	condition K1a condition K1b(4) condition K1c(3) condition K1b(6) condition K2a(1) condition K3b(1)(a)	0.02 grains/dscf only operate P14 with C14 record Δp 1x/8 hours operation or 1x/day maintain C14 Δp between 0.2-10 in 20% opacity Ash shall be loaded into enclosed trucks	COMP-ST 2/2006 COMP-R COMP-R COMP-R COMP-BH COMP-R	Range: 0.26-6.19 in.

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
		condition K3b(1)(a)	through a tightly fitted port. Ash loaded to open trucks shall be wetted	COMP-R	
S15 P15 B09 Fuel Stor- age Silo Vents	Particulate	condition L1a(1) condition L1b(2) condition L1b(3) condition L1b(4) condition L1b(5)	0.25 pounds per hour only operate P12 with bin vent filters Follow MPAP for bin vent filter system. maintain C15 Δp between 1-4 in water perform annual inspection of C15	COMP-BH COMP-R COMP-R INT-COMP-R COMP-R	See Note 2: P22 revised C15 Δp to 1-7 inches Range: 3.8-6.5 in. Inspected: May 8, 2013
	Visible	condition L2a(1) condition L2a(2)	20% opacity 10% opacity w/coal dust	COMP-BH COMP-BH	
P16 C16 Limestone Storage Silo controlled by baghouse C16	Particulate PM-10	condition M1a(1) condition M1b(3) condition M1c(2) condition M1b(4)	Exhaust air from the baghouse shall be vented inside the building. Only operate P13 with a baghouse record Δp 1x/8 hours operation or 1x/day maintain baghouse Δp between 0.5-6 in.	COMP-R COMP-R COMP-R COMP-R	Range: 1.98-4.74 in.
F21 Solid Fuel Railcar & Truck Unloading to crusher house and store silos	Fugitive Dust	condition N1a(1) condition N1b(1) condition N1b(2) condition N1b(3) condition N1c(2) condition N1b(4)	20% opacity during unloading Use below grade hopper and totally enclosed conveying system for unloading Dust created shall be controlled using wet suppression system per FDCP. Develop and follow a FDCP. Record operation daily and FDCP action ≥ 1 trained person to monitor compliance	COMP-R COMP COMP-R COMP-R COMP-R COMP-R	
F23 Limestone Unloading railcars/trucks	Fugitive Dust	condition O1a(1) condition O1b(1) condition O1b(2) condition O1c(2) condition O1b(3)	20% opacity from trailer unloading Transfer limestone to P13 via totally enclosed pneumatic distress system. Develop and follow a FDCP. Record operation daily and FDCP action ≥ 1 trained person to monitor compliance	COMP-R COMP COMP-R COMP-R COMP-R	21 trained employees
S10, B10 Package Gas Boiler	PM,PM10,PM2.5	condition P1a(1) condition P1a(2) condition P1b(2)	0.10 lb/mmBtu 195 lbs of PM/12-month rolling avg. Perform annual tune-up	COMP-R COMP-R COMP-R	
	Visible emissions	condition P2a(1)	20% opacity	COMP-R	Natural gas is only fuel Max(Ave): 31.6 lb/M Tuned: May 23, 2013
	Nitrogen Oxides	condition P3a(1)	1,086 lbs of NOx/12-month rolling avg.	COMP-R	

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
	Carbon monoxide	condition P4a(1)(a) condition P4a(1)(b) condition P4c(5)(a)	0.109 lbs/mmBtu @ <50% load 0.036 lbs/mmBtu @ <50% load Monthly record the PV and setpoints	COMP-ST 8/ 2012 COMP-ST 8/ 2012 COMP-R	0.000290 lb/m 0.000283 lb/m
	Sulfur dioxide	condition P5a(1)	16.7 lbs of SO ₂ /12-month rolling avg.	COMP-R	Max(Ave): 2.5 lb/M
	Organic compds.	condition P6a(1)	153 lbs of SO ₂ /12-month rolling avg.	COMP-R	Max(Ave): 22.9 lb/M
	Greenhouse gas	condition P7a(1)	1,492 ton CO ₂ e /12-month rolling avg.	COMP-R	Max(Ave): 250 ton/M
Facility Wide Emission Limits	Hydrogen Chloride	condition ZZZ2a(1) condition ZZZ2a(2)	≤ 11 Lb/hr from S10 – See Note 1. ≤ 28 Lb/hr from S20 – See Note 1.	COMP-ST 5/ 2010 COMP-ST 5/ 2010	
	Arsenic	condition ZZZ3a(1) condition ZZZ3a(2)	≤ 27.4 Lb/12 M from S10– See Note 1. ≤ 98.1 Lb/12 M from S20– See Note 1.	COMP-ST 5/ 2010 COMP-ST 5/ 2010	Max: 2.95 lb/12 M Max: 0.21 lb/12 M
<p>Note 1: HCL from S10 (lb/hr) = 270 mmBtu/hr x 4.09 E-3 (from B09 emission factor test) ≈ 1.1 lb HCl/hr (which is < the limit). HCL from S20 (lb/hr) = 650 mmBtu/hr x 4.09 E-3 (from B09 emission factor test) ≈ 2.6 lb HCl/hr (which is < the limit). As from S10 (lb/hr) = 270 mmBtu/hr x 3.31 E-6 (from B09 emission factor test) ≈ <0.1 lb As/hr (which is < the limit). As from S20 (lb/hr) = 650 mmBtu/hr x 3.31 E-6 (from B09 emission factor test) ≈ <0.1 lb As/hr (which is < the limit).</p> <p>Note 2: MPU submitted an air pollution control operation permit application, plans and specifications on May 14, 2013 to address what the appropriate range should be for this baghouse. WDNR issued draft operating permit#: 436035930-P22 on June 3, 2013 and the final permit on July 22, 2013 to address the changes requested in the application. The current limit was revised as follows: “The pressure drop across the bin vent filter system shall be maintained between 1 and 7 inches water column.”</p>					

<p>ABBREVIATIONS USED IN THIS REPORT</p> <p>CDMS means a continuous dust monitoring system.</p> <p>COMP-BH means in compliance with limit based on use of a baghouse.</p> <p>INT-COMP-BH means in intermittent compliance with limit based on use of a baghouse.</p> <p>COMP-CEM means in compliance with limit based on use of a continuous emission monitor.</p> <p>COMP-COM means in compliance with the limit based on use of a continuous opacity monitor.</p> <p>INT-COMP-COM means in intermittent compliance with the limit based on use of a continuous opacity monitor.</p> <p>COMP-EER means in compliance based on review of quarterly excess emission reports.</p> <p>COMP-FSA means compliance with limit based on quarterly fuel sampling and analysis reports.</p> <p>COMP-R means in compliance based on review of daily or monthly records or file documents.</p> <p>INT-COMP-R means in intermittent compliance based on review of daily or monthly records or file documents.</p> <p>FDCCP means a fugitive dust control plan.</p> <p>HAP means hazardous air pollutants.</p> <p>MPAP means Malfunction, Prevention and Abatement Plan.</p> <p>SNCR means Selective Non-Catalytic Reduction (a NO_x control system).</p> <p>SSM means startup, shutdown and malfunction.</p> <p>WDNR means Wisconsin Department of Natural Resources.</p>	<p>M means Month</p> <p>gal means gallon</p> <p>HI means Heat Input</p> <p>lb/m means pounds per million Btu</p> <p>Btu means British thermal unit</p> <p>mmBtu means million British thermal unit</p> <p>m/M means million Btu per month.</p> <p>in. means inches of water</p> <p>Q means calendar quarter</p> <p>µg/g means micrograms per gram</p> <p>PV means Process Variable</p> <p>A means Average</p>
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